



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,158	09/26/2001	Martin Li	TI-33430	9577
23494	7590	12/14/2007		EXAMINER
TEXAS INSTRUMENTS INCORPORATED				GREY, CHRISTOPHER P
P O BOX 655474, M/S 3999			ART UNIT	PAPER NUMBER
DALLAS, TX 75265			2616	
				NOTIFICATION DATE
				DELIVERY MODE
			12/14/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[uspto@ti.com](mailto:uspto@ti.com)  
[uspto@dlemail.itg.ti.com](mailto:uspto@dlemail.itg.ti.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/964,158	LI ET AL.
	<b>Examiner</b> Christopher P. Grey	<b>Art Unit</b> 2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 October 2007.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4,5,7,10-14,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1,4,5,7,18 and 19 is/are allowed.
- 6) Claim(s) 10-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

*Detailed Action*

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 10-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (US 6732206) in view of Chen et al. (US 5870628), hereinafter referred to as Chen.

**Claim 10, 14** Jensen discloses storing data cells from the ATM master processing unit (**Col 1 lines 65-66, master 10**) in a buffer storage unit (**Col 2 lines 12-13 FIFO**) coupled to the communication bus (**fig 1, 12, bus**), wherein the buffer storage unit is a FIFO storage unit (**fig 1, 22**) configured to store two of the data cells (**Col 2 lines 29-31, capable of holding two cells**) to permit the data cells to be transferred on consecutive clock cycles to a destination location (**fig 2, U1 BUS transferring data from the cell FIFO on a clock cycle 8 BIT/16MHZ**);

Jensen discloses comparing a field in the data cell with the contents of a register to determine the destination location of each data cell (**Col 3 lines 7-16, where a CAM register is looked up in order to find a match/comparison to the first 2 words**).

Jensen discloses generating a signal identifying the destination location (**Col 3 lines 17-20, valid target port address**);

Jensen discloses the use of a status bit indicating the availability of a CDB for cell transfer to a target (**Col 3 lines 41-45 and polling as described in Col 3 lines 26-27, where the status bit is equivalent to a READY signal as disclosed in the claim.**).

Jensen does not specifically disclose when storage space is available, transferring a data cell from the buffer storage unit to the direct memory access unit.

Chen discloses when storage space is available, transferring a data cell from the buffer storage unit to the direct memory access unit (**Col 5 lines 1-13, where the data cells are transferred from a raw cell FIFO to a DMA FIFO/Unit**). Furthermore, Chen discloses an indication that a DMA unit is available (**Col 6 lines 37-38**).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the DMA FIFO's of Chen within the system as disclosed by Jensen, specifically replacing the CDB's. The motivation for this combination is to provide a network adaptor for receiving and processing ATM cells in a more efficient manner (**Col 3 lines 15-17**).

**Claim 11** Jensen discloses transferring a data cell from the buffer storage unit to the ATM slave processing unit on consecutive clock cycles (**Col 2 lines 46-65 and figs 3 and 4, wherein the U1 TX state machine operates on a clock cycle, and allows the transmission of data from the FIFO**).

**Claim 12** Jensen discloses implementing the signals exchanged over the communication bus in a UTOPIA format (**Col 1 lines 65-66**).

**Claim 13** Jensen discloses applying the signal identifying the destination location to a target unit (**Col 3 lines 17-22, the comparison is determined to be valid, and the target CDP is**

**polled, where this polling information is also equivalent to the signal identifying the destination).**

Jensen does not specifically disclose the target being a DMA.

However the rejection of claim 10 discloses the target being a DMA, and the motivation is discussed within the rejection of claim 10 above.

**Allowable Subject Matter**

2. Claim 1, 4, 5, 18 and 19 are allowed.

**Response to Arguments**

3. In response to the applicants arguments filed on 10/30/07, these arguments are moot in view of new grounds of rejection.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Grey whose telephone number is (571)272-3160.

The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272 7629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey  
Examiner  
Art Unit 2667

C.G.  
12/8/07

  
DORIS H. TO  
SUPPLY PATENT EXAMINER  
TECHNOLOGY CENTER 2600